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MECHANISM FOR APPLYING PRESSURE TO THE DRAFTING ROLLERS OF SPINNING AND OTHER TEXTILE PREPARATION MACHINERY

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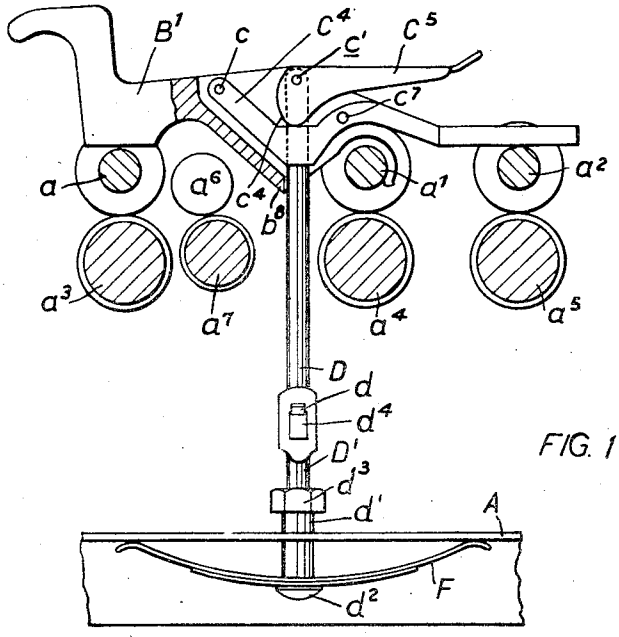


FIG. 1

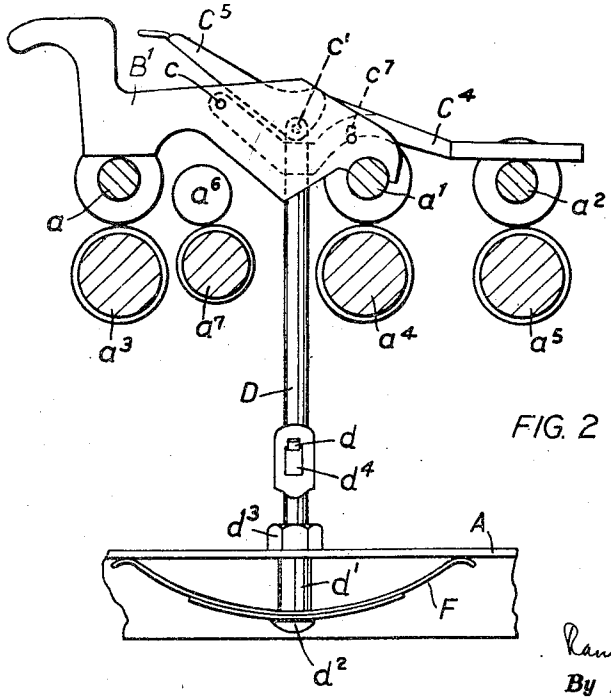


FIG. 2

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MECHANISM FOR APPLYING PRESSURE TO THE DRAFTING ROLLERS OF SPINNING AND OTHER TEXTILE PREPARATION MACHINERY

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3 Claims. (Cl. 19—135)

This invention relates to improvements in saddle weighting mechanism for the top drafting rollers of spinning and other textile preparatory machinery, having a plurality of consecutive pairs of drafting rollers, the weighting mechanism being of the type in which the saddle assembly applies weight to three top rollers under the action of a spring mounted on a drafting head and exerting a downward pull on the saddle assembly through a weight hook, a fourth top roller being self weighted.

According to the invention the weighting mechanism comprises a saddle bearing on the top front roller and on the top second roller, a member or lever pivoted to the saddle intermediate the front and second rollers to rest on the top rear roller, an actuating lever having a cam or eccentric end bearing on the lever, a weight hook rod pivoted to the actuating lever and a leaf spring mounted in the saddle assembly below the lines of rollers and connected by a rod to the weight hook rod by which pressure is applied through the lever and saddle to the lines of rollers.

The invention will be described with reference to the accompanying drawings:

Fig. 1 is a part longitudinal section through a drafting head showing the weight applying mechanism in the "on" position.

Fig. 2 is a similar view showing the weight applying mechanism in the "off" position.

A drafting head A for three top rollers is provided with a saddle B^1 constructed to apply pressure to the top front roller a and to the second top roller a^1. A lever C^4 is provided on a pin c extending between flanges on the saddle B^1 intermediate the first and second top rollers, and rests on the neck of the rear top roller a^2. An actuating lever C^5 having a cam or eccentric end c^4 is pivoted on a pin c^1 on the saddle B^1 and applies pressure through the saddle to the three lines of rollers. A fourth line of rollers a^6, a^7 is self weighted. An arm D formed with a hooked lower end d is also mounted on the pin c^1 the hook d being engaged in a slot d^4 in a rod D^1 passing through the head A and screwed at its free end to receive a nut d^1 and screw d^2 by which a leaf spring F is secured thereto. A second nut d^3 on the upper side of the web of the head A engages the web when in the "off" position to limit the downward movement of the rod D^1. The head A is of inverted channel shape to house the leaf spring F.

The free ends of the leaf spring F engage the underside of the web. The length of the rod D^1 may be adjusted to apply the requisite pressure to the rod D by the nut d^1.

Pressure is applied between the top lines of rollers and the bottom lines of rollers by the saddle B^1 when the hook d is engaged by the rod D^1 and the lever C^5 is moved into the "on" position as shown in Fig. 1. The pressure is exerted in the front rollers a, a^3 and the second rollers a^1, a^4 directly by the saddle B^1 and on the rear rollers a^2, a^5 by the lever C^4.

If it is desired to apply pressure to the front top roller a and to the rear top roller a^2 without applying pressure to the second top roller a^1, such as when treating long staple fibres a pin may be inserted through holes c^7 in the lever C^4 and through the flanges of the saddle B^1 thereby relieving the pressure on the second top roller a^1 whilst pressure is still applied to the front top roller a and to the rear top roller $a2$. Pressure may also be applied to the front top roller a and to the second top roller a^1 with the back roller a^2 removed if required.

If it is desired to remove the front top roller a for cleaning or other purposes whilst the machine is running, this can be done without affecting the pressure remaining on the back top roller a^2 and on the second top roller a^1 by forming the saddle B^1 with a portion b^8 which will contact with the weighting rod D and so prevent the forward end of the saddle from falling when the top front roller a is removed.

The saddle B^1 may apply pressure to a central neck of a pair of top rollers or to the necks at the outer ends of the rollers.

What I claim is:

1. A saddle weighting mechanism for the top drafting rollers of spinning and other textile preparatory machines having a plurality of consecutive pairs of top and bottom front, second and rear drafting rollers disposed in upper and lower lines, comprising a saddle bearing on the top front roller and on the top second roller, a weight applying lever pivoted to the saddle intermediately of the front and second rollers to rest on the top rear roller, an actuating lever pivoted to the saddle and having a cam surface on one end thereof engaging the weight applying lever, a weight hook rod pivoted to the actuating lever, a leaf spring mounted below the lines of rollers, and a rod connecting the leaf spring to the weight hook rod for applying pressure through the weight applying lever and saddle to the lines of rollers.

2. A saddle weighting mechanism as defined in claim 1, including a pin for insertion through the weight applying lever and the saddle to remove weight from the second top roller.

3. A saddle weighting mechanism as defined in claim 1, wherein the saddle is formed with a portion positioned to contact the weight hook rod when the top front roller is removed.

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